

USSN 09/596,402
Group Art Unit 3762
Docket No. 151P09399US01

REMARKS

Claims 1 – 8 and 9 – 22 are pending in this application. Independent claims 1, 18, 19, 20 and 21 have been amended. Claims 23 – 45 were previously canceled.

Amendments to the Claims

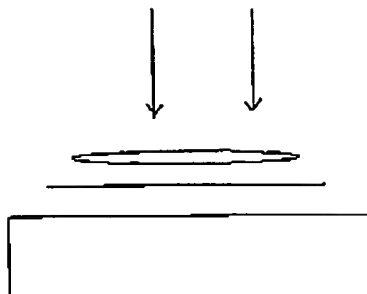
Independent claims 1, 18, 19, 20 and 21 have been amended to define an axis to which the shield can then properly be referred as being approximately perpendicular. Support for this amendment can be found in the drawings. No new matter has been added.

Rejections Under 35 USC § 102 and 35 USC § 103 over Kelly '955

Claims 1 – 8 and 10 – 22 have been rejected over Kelly '955 (claim 12 also in view of Schulman '474). These rejections, over the claims as amended, are respectfully traversed.

A simplified illustration of the orientation of the electronics, represented by a rectangular box, a magnetic shield, represented by a straight line, the coil, represented by an oval, and the incoming magnetic field, represent by the arrows, of the present invention is presented below.

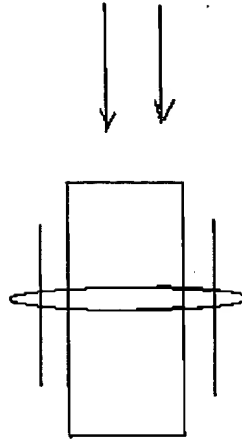
USSN 09/596,402
Group Art Unit: 3762
Docket No. 151P09399US01



As can be seen in the illustration, the axis of the coil is approximately perpendicular to the shield and the shield is positioned between the coil and the electronics.

A simplified illustration of the electronics, magnetic shield, coil and incoming magnetic field, similarly represented, in accordance with the teaching of Kelly '955 is presented below.

USSN 09/596,402
Group Art Unit: 3762
Docket No. 151P09399US01



As can be seen in the illustration that the axis of the coil in Kelly '955 is parallel to, not perpendicular to, the shield. This is in direct contrast to the statement in claims Independent claims 1, 18, 19, 20 and 21 of the present invention of "approximately perpendicular to."

Further, it can be seen in the illustration that shield in Kelly '955 is wrapped around the magnetic shield. The "magnetic shield" in Kelly '955 is not a shield at all, but merely functions as a collector of flux to the coil. The "magnetic shield" in Kelly '955 can not act as a shield for the electronics because it is not located between the coil and the electronics. In contrast, claims 1, 18, 19, 20 and 21 of the present invention state that the "shield being located between the recharging coil and the electronics."

Thus, Kelly '955 not only does not anticipate the present invention, Kelly '955 actually teaches away from the geometric positioning of the present invention. The

USSN 09/596,402
Group Art Unit: 3762
Docket No. 151P09399US01

rejection of claims 1, 18, 19, 20 and 21 over Kelly '955 is improper and should be withdrawn.

Claims 2 – 8, 10 – 17 and 22 are dependent upon one of the independent claims. The rejections of these claims over Kelly '955 is improper for the same reasons as applied to claims 1, 18, 19, 20 and 21 and should be withdrawn.

Schulman '474 is cited only for eddy cuts and does not add to the base rejections of these claims.

Rejections Under 35 USC § 102 and 35 USC § 103 over Zarinetchi '431

Claims 1 – 8 and 10 – 22 have been rejected over Zarinetchi '431 (claim 12 also in view of Schulman '474). These rejections, over the claims as amended, are respectfully traversed.

Zarinetchi '431 discloses a transcutaneous energy transfer system in which the secondary recharging coil surrounds an enclosure, referred to as a cage, containing an electronic circuit board. [Magnetic] flux is guided through the side walls of the cage, density being highest in these side walls (column 5, lines 2 – 26).

With the amendment to claims 1, 18, 19, 20 and 21, the rejections of claims 1 – 8 and 10 – 22 over Kelly '955 (claim 12 also in view of Schulman '474) are improper and should be withdrawn. Claims 1 – 8, 10 – 22 should now be allowable. While cage 22 of Zarinetchi '431 may improve recharging efficiency, Zarinetchi '431 does not disclose, show nor suggest the presently claimed invention.

Independent claims 1, 18, 19, 20 and 21 all require a magnetic shield placed on the distal side of the recharging coil to improve recharging efficiency, the shield being approximately perpendicular to the axis of the secondary recharging coil and the shield being located between the recharging coil and the electronics [emphasis added]. Zarinetchi '431 does not show nor suggest such a structure.

The magnetic shield in Zarinetchi '431 is neither located on the distal side of the secondary recharging coil nor located between the recharging coil and the electronics. Rather the shield in Zarinetchi '431 is located in the center in the recharging coil, i.e., the

USSN 09/596,402
Group Art Unit: 3762
Docket No. 151P09399US01

recharging coil is wound around the cage shielding the electronics. The cage in Zarinetchi '431 operates to improve recharging efficiency by focusing magnetic flux toward the recharging coil. In contrast, the shield in the present invention prevents electromagnetic energy passing near or through the secondary coil from reaching the containing holding electronics. Thus, Zarinetchi '431 does not have the structure required by all of the independent claims of the present invention, but the operation of Zarinetchi '431 is fundamentally different.

Thus, Zarinetchi '431 not only does not anticipate the present invention, Zarinetchi '431 actually teaches away from the geometric positioning of the present invention. The rejection of claims 1, 18, 19, 20 and 21 over Zarinetchi '431 is improper and should be withdrawn.

Claims 2 - 8, 10 - 17 and 22 are dependent upon one of the independent claims. The rejections of these claims over Kelly '955 is improper for the same reasons as applied to claims 1, 18, 19, 20 and 21 and should be withdrawn.


Schulman '474 is cited only for eddy cuts and does not add to the base rejections of these claims.

Summary

With the amendment to claims 1, 18, 19, 20 and 21, all of the pending claims in this application should be allowable, this application should be in condition for allowance and a notice to that effect is earnestly solicited.

Respectfully Submitted,

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